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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/525,347

02/22/2005

Tomas Andel

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3930

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NOTARO AND MICHALOS  
100 DUTCH HILL ROAD  
SUITE 110  
ORANGEBURG, NY 10962-2100

EXAMINER

BOES, TERENCE

ART UNIT

PAPER NUMBER

3682

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/525,347	ANDEL, TOMAS	
	<b>Examiner</b>	<b>Art Unit</b>	
	TERENCE BOES	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Drawings***

1. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the reference characters are hand written, non-uniform, and unclear. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the side clearance between the radial beams of the peripheral toothed portion and side walls of the pocket-like recesses of the central portion is from 0,5 to 10% of the rivet shank diameter must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The disclosure is objected to because of the following informalities: The term "centring" appearing throughout the specification appears to be a typographical, or translational error of the term --centering--.

Appropriate correction is required.

### ***Claim Objections***

4. Claims 1-7 are objected to because of the following informalities:

- the term "lightweight" appearing in the preamble of each claim is a relative term.
- the term "recess" appearing in claim 1 appears to be a typographical error of the term --recesses--.
- The second occurrence of the phrase "radial beams" in claim 1 should read --said radial beams--, as antecedent basis has been provided.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "light" in claim 1 is a relative term which renders the claim indefinite. The term "light" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Regarding claim 1, the phrase "pocket-like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Regarding claim 3, the term "centring" appears to be a typographical, or translational error of the term "--centering--". The metes and bound of the claim are unclear.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 and 2, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichols US 2003/0199351 in view of Livermore US 1,115,557.

Nichols discloses:

- a central portion (30) made from light metal alloy, to which a peripheral toothed portion (20) made from ferrous alloy is joined,
- where a thickness at least over the joining area, is decreased by 10 to 60%, in relation to full thickness of said toothed peripheral portion (20, 22), and a thickness of a bottom of the pocket-like recess (32) in the central portion is decreased by 20 to 70%, in relation to full thickness of the central portion of the sprocket (see mating flange portions 22 and 32.
- a side clearance between the radial beams of the peripheral toothed portion and side walls of the pocket-like recesses of the central portion is from 0,5 to 10% of the rivet shank diameter (product by process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps (see MPEP 2113)).

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- lightening openings (see figure 2, 6 lightening openings are shown circumferentially within 30) are created in the central portion of the sprocket.
- at least a circumferential strip (see circumferential strip containing holes 33) is created between said lightening openings and the outer circumference of the central portion, where the thickness of said strip, in radial direction, is at least 50% of the full thickness of said central portion (thicknesses can be seen in figures 2 and 2A).
- a wall is created between the lightening openings and the pocket-like recesses of the central portion, where a height of said wall is the same as the full thickness of said central portion and a width of said wall is at least 50% of the full thickness of said central portion (see side walls of lightening openings)

Regarding functional language, the examiner notes while features of an apparatus may be recited either structurally or functionally, claims directed to >an< apparatus must be distinguished from the prior art in terms of structure rather than function. The references disclose all claimed structural limitations and therefore anticipates the claim. See MPEP 2114).

Nichols does not disclose rivets or radial beams being overlapped across bottoms of pocket-like recesses, and where a thickness of radial beams, at least over the joining area, is decreased by 10 to 60%, in relation to full thickness of said toothed peripheral portion, and a thickness of a bottom of the pocket-like recess in the central portion is decreased by 20 to 70%, in relation to full thickness of the central portion of the sprocket

Livermore teaches rivets (3) and radial beams (9) being overlapped across bottoms of pocket-like recesses (14), and where a thickness of radial beams, at least over the joining area, is decreased by 10 to 60%, in relation to full thickness of said toothed peripheral portion (see figure 6, C2/L60-65), and a thickness of a bottom of the pocket-like recess in the central portion is decreased by 20 to 70%, in relation to full thickness of the central portion of the sprocket (see figure 6, C2/L60-65) for the purpose of preventing rivet wear (C1-2/L54-57).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Nichols and provide rivets and radial beams being overlapped across bottoms of pocket-like recesses, and where a thickness of radial beams, at least over the joining area, is decreased by 10 to 60%, in relation to full thickness of said toothed peripheral portion, and a thickness of a bottom of the pocket-like recess in the central portion is decreased by 20 to 70%, in relation to full thickness of the central portion of the sprocket, as taught by Livermore, for the purpose of preventing rivet wear.



7. Claims 3-7, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nichols US 2003/0199351 in view of Livermore US 1,115,557 as applied to claim 2 above, and further in view of Gapp et al. US 3,685,391.

Nichols in view of Livermore discloses all of the claimed subject matter as described above. Nichols in view of Livermore does not disclose titanium alloy rivets.

Gapp et al. teaches titanium alloy rivets (see abstract, figures 1-9) for the purpose of increasing strength (see abstract).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Nichols in view of Livermore and provide titanium alloy rivets, as taught by Gapp et al., for the purpose of increasing strength.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TERENCE BOES whose telephone number is (571)272-4898. The examiner can normally be reached on Monday - Friday 9:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. B./

Examiner, Art Unit 3682

2/5/08

/Richard WL Ridley/

Supervisory Patent Examiner, Art Unit 3682